

Fully flexible packaging technology for effervescent

In order to manufacture effervescent tablets, Hermes Pharma relies on Romaco technologies. With their high levels of process safety and flexibility and their short retooling and cleaning times, these machines are optimally adapted to the manufacturer's requirements.



With up to 900 picks per minute, the Siebler FlexTrans is said to be the world's fastest transfer unit for strip packaging



Effervescent tablets are filled carefully according to the rotation principle using the Romaco Siebler STF 120 tube filling machine

Hermes Pharma is Europe's biggest developing and manufacturing organisation of user-friendly dosage forms. Its products are not only effective but also easy to swallow, simple to dose, and taste and smell good. Apart from medicinal products such as cough expectorants or painkillers, Hermes Pharma develops dietary supplements – magnesium or vitamin preparations, for instance – which are manufactured in the form of instant drinks and orally disintegrating granules. It also produces lozenges and chewable or effervescent tablets.

GENTLY PACKED EFFERVESCENT PREPARATIONS

Packing effervescent tablets is a particular challenge because they can easily break due to their porous structure. These tablets are also highly sensitive to light, air and moisture.

It is especially important to transport and pack them tightly if they are classified as medicinal products. This dosage form must not be stored unpacked in a buffer container. Instead, it must be processed in-line as soon as the tablets have been compressed to protect them from environmental and mechanical influences.

When packing effervescent products, Hermes Pharma prioritises maximum flexibility, reliable processes and short changeover as well as gentle tablet handling.

The company trusts the inline competence of Romaco for the primary packaging effervescent tablets, either in four-side sealed strips or in plastic or aluminium tubes, for the in-process transfer system and the secondary packaging in cartons. Romaco is a leading international supplier of packaging and processing technologies.

Hermes Pharma currently operates several heat sealing machines, two tube filling machines and a servo driven transfer unit from Romaco Siebler as well as various Romaco Promatic cartoners at its site in Wolfratshausen, Bavaria.

PROTECTING FRAGILE PRODUCTS

Romaco Siebler HM 1E series strip packaging machines are used to seal effervescent tablets individually in four-side sealed sachets. The foil web is subsequently perforated and cut to size. When the fragile effervescent tablets are fed into the sealing station, they are kept in continuous motion by a feeding bow. The feeding bow was specially developed for this purpose and turned from a horizontal into a vertical position with virtually no stress, so that the risk of breakage or abrasion is minimised.

The Romaco Siebler heat sealing machines are additionally characterised by precise temperature distribution on the sealing surfaces and only one roller frame for the sealing process. Absolutely tight sealing



Fully integrated strip packaging line from Romaco Siebler including a heat-sealing machine, a transfer unit and a Romaco Promatic cartoner



Under a development collaboration arrangement, Hermes Pharma was involved in the design of Romaco Siebler's STF 120 tube filling machine



Hermes Pharma packs effervescent tablets in strips of two, four or six using the Romaco Siebler strip packaging line

patterns are achieved in this manner without double seals.

FULL FLEXIBILITY WITH A SERVO DRIVEN TRANSFER SOLUTION

Hermes Pharma relies on the Siebler FlexTrans, which is said to be the world's fastest flexible transfer unit for strip packaging with up to 900 picks per minute to transfer the sealed strips to the cartoner.

A camera checks their position and assigns the strips to the robotic vacuum grippers, which convey the product directly into the cartoner's bucket chain. The manufacturer uses the Siebler FlexTrans to transfer strips of two, four or six tablets and has full flexibility in terms of pack sizes, strip layouts and stack heights.

"After we purchased the FlexTrans strip packaging line in 2012, we were able to manufacture the first batch just six weeks after the system was delivered. Ever since then, the line has been working completely reliably and with only minimal maintenance," reports Ricardo Alves, production technology assistant at Hermes Pharma. "It's also worth noting that all components – from the tablet feeding system and primary packaging to the cartoner – are Romaco-made, so that all critical interfaces originate from a single supplier."

ROTATION PRINCIPLE ENABLES GENTLE FILLING

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HIGHLY FLEXIBLE SECONDARY PACKAGING

For the secondary packaging requirements, six PC 4000 (continuous motion) and P 91 (intermittent motion) series cartoners were selected by the manufacturer along with two Romaco Promatic top load multibox cartoners. This equipment enables a huge range of cartons to be processed. The two top-load cartoners, for example, allow up to 10 tubes to be packed in one display carton. The

tubes are picked up by a pick and place system, partially rotated and then placed in two layers with the caps aligned in different directions.

Hermes Pharma changes over the secondary packaging machines five or six times per day. "We have a lot of different box sizes in our portfolio and the batches we manufacture are sometimes very small," explains Daniel Schatz, manager production engineering mechanics at Hermes Pharma. "It's a great advantage for us in day-to-day production that both the cartoners and all other Romaco machines can be retooled very easily. Most format changes are completely tool-free, and the machines are easy to clean thanks to the GMP compliant design."

CLOSE COOPERATION OVER MANY YEARS

Hermes Pharma first began using Romaco technologies in 1983 and has continuously expanded its stock of Romaco machines ever since. The solution provider, which has its headquarters in Karlsruhe, Germany, has regularly received valuable input from Hermes Pharma regarding new technological advances. For example, the company was involved in the design of the FlexTrans strip packaging line and the Siebler STF 120 tube filling machine under a development collaboration arrangement.

"We appreciate Romaco's openness and the effort they put in to accommodating our needs. Romaco is a very good partner of ours," says Schatz, adding that "thanks to this close cooperation, our day-to-day production experiences directly support the development of new technologies. It's a win-win situation for both Romaco and Hermes Pharma." ■

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